

A New Insular Brown Snake

By ERIC WORRELL.

Seven specimens of this small race of brown snake were collected in the Recherche Archipelago, Western Australia, by Mr. C. Tanner, honorary herpetologist to the National Museum, Melbourne.

ACKNOWLEDGMENTS.

Thanks are due to Mr. C. Tanner, who presented two specimens to the Australian Reptile Park collection and to Mr. C. Brazenor, Director of the National Museum of Victoria, who has permitted me to describe the subspecies from material in the Museum. Mr. K. Slater, animal ecologist at the Australian Reptile Park, drew the excellent figures.

Demansia nuchalis tanneri subsp. nov.

Type: An adult male taken from Boxer Island in the Recherche Archipelago in 1959 by Mr. C. Tanner. It is now lodged in the National Museum, Melbourne, No. D09819.

Paratype: An adult male lodged at the Australian Reptile Park, Gosford, New South Wales.

Diagnosis: This is a small, darkly coloured race of *Demansia nuchalis* characterised by 19 midbody scale rows and certain penial characters to be discussed. Chestnut brown in coloration. It is distinguished from its closest affinity *Demansia nuchalis affinis*² by its smaller size, supported by sexual maturity at a smaller size evidenced by penial development. Ventral scales number 208-212; anal 2; subcaudals 56-60 divided.

Description: Head hardly distinct from neck, form cylindrical, tail moderate as in typical race. Rostral about as broad as deep; internasals not as long as prefrontals; large nostril in a single nasal which makes contact with preocular; frontal about twice as long as broad, about as broad and only slightly longer than supraoculars; on all specimens a few irregular scales completely border the parietals between the temporals; temporals 1 + 2; single preocular, 2 postoculars; 6 supralabials, third and fourth subocular; 6 infralabials; anterior chinshields about as large as posterior which are separated by a single scale. There is no variation in the head-shields in the entire series. In the type the ventrals number 208, subcaudals 57; total length of the type, which is also the largest specimen, 910 mm. or three feet, tail 151 mm. In the paratype, ventrals 110, subcaudals 60; total length 700 mm., tail 112 mm.

Colour: Chestnut brown above, a little lighter ventrally. Ventrolaterally some indistinct dark blotches may be discerned at the posterior edge of the ventrals and distributed over most of the ventral surface. Beneath the head is greyish to pale brown.

1. *Pseudonaja nuchalis* Gunther, 1858, Cat. Snakes Brit. Mus. p. 227.

2. *Pseudonaja affinis* Gunther, 1872, Ann. Mag. Nat. Hist. (4) 9, p. 35, pl. Iv, fig. C: Australia.

Fig. A. Extruded penis (right) of *Demansia textilis textilis* three feet four inches in length showing immature condition of seminal groove.

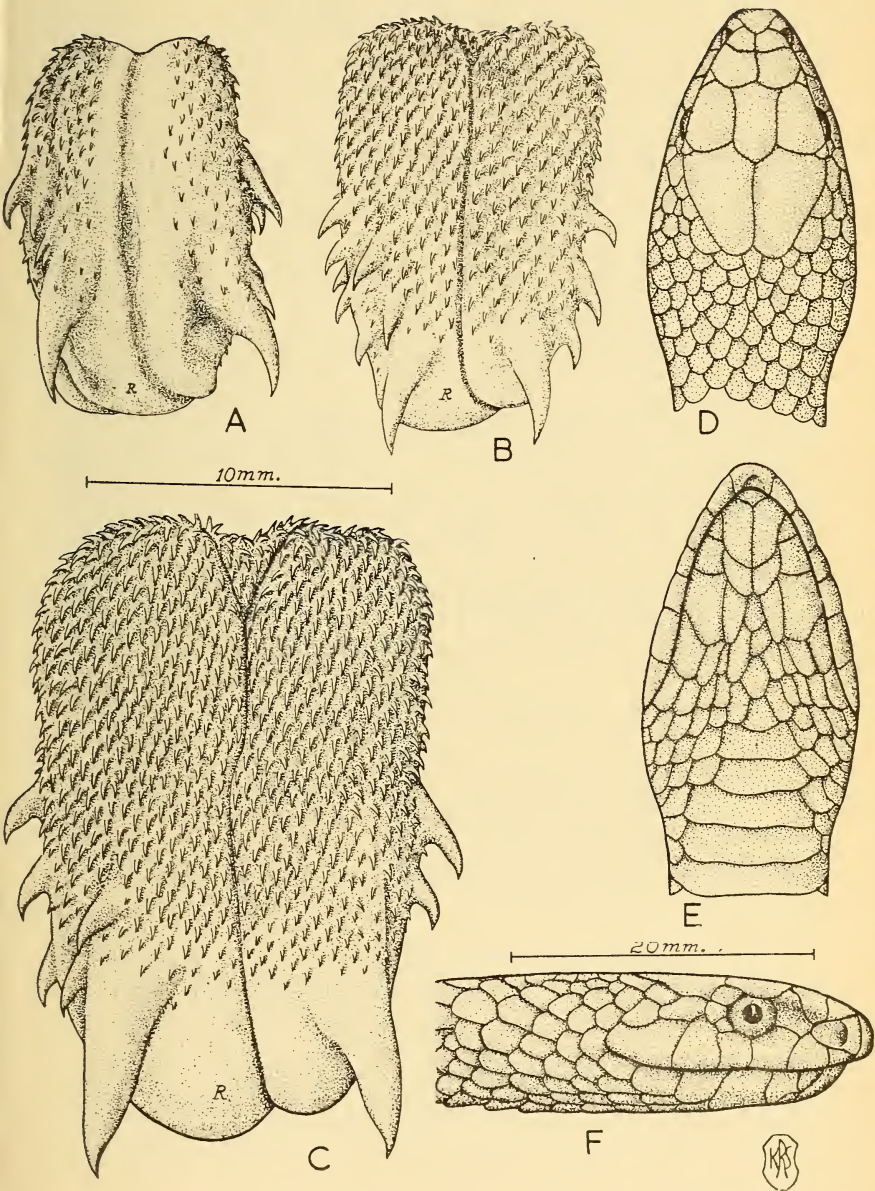
Fig. B. Extruded penis (right) of *Demansia nuchalis tanneri* two feet four inches in length showing maturity of seminal groove.

Fig. C. Extruded penis (right) of *Demansia nuchalis affinis* four feet two inches in length showing greater size of penis at a similar state of maturity to *tanneri* (fig. B).

Fig. D. Dorsal aspect of *Demansia nuchalis tanneri*.

Fig. E. Ventral aspect of *Demansia nuchalis tanneri*.

Fig. F. Lateral aspect of *Demansia nuchalis tanneri*.



DISCUSSION.

There is remarkably little difference in colour and scalation in all seven specimens. The subcaudal scale count on National Museum specimen No. D824 was not included due to a truncate tail. *Demansia nuchalis tanneri* is probably of *affinis* stock but appears to have been geographically isolated for so long that it is possible that a biological species is involved. *D.t. affinis* is distributed throughout southern Western Australia and is characterised by its large size (to about six feet) and 19 midbody rows of scales; *tanneri* is characterised by its small size, probably three to four feet, and 19 midbody rows of scales. A small race of brown snake has been described from Coffin's Bay Peninsula, but *Demansia textilis inframacula*,³ this South Australian form, is characterised by 17 rows of scales.

Mr. Tanner and I have both observed specimens of *tanneri* as small as two feet four inches in length in the act of copulation. It seems unlikely that this small race could interbreed with as large a race as *affinis*. Hence my belief that a biological species may be indicated.

Extrusion of the penes of the smallest *tanneri* and other male specimens revealed a state of development not attained by the nominal race until over four feet in length. The penes of *textilis textilis* were immature in a specimen measuring three feet four inches (fig. A) in that the spermatic groove had not formed sufficiently to draw together the surrounding spines. The penes of *nuchalis tanneri* two feet four inches in length were fully mature (fig. B), but much smaller when compared to the penes of an adult *nuchalis affinis* measuring four feet two inches (fig. C), and taken at Esperance, on the mainland of Western Australia near the Recherche Archipelago. Boxer Island, the type locality for *tanneri*, is on the western extremity of the archipelago and only a few miles from the coastal town of Esperance.

A small type of brown snake known from Rottnest Island would probably be referable to *tanneri*.

3. *Demansia textilis* var. *inframacula* Waite. 1925, Records S.A. Museum iii, p. 27, figs. 10, 11.